

Amendments to the Specification:

Please replace the title with the following replacement title:

SYSTEMS AND TECHNIQUES FOR DIRECTED ACYCLIC GRAPH TRACE  
CACHING

Please replace the paragraph beginning at page 19, line 10 with the following amended paragraph:

As described above, confidence metric 413 can also be used to determine if trace builder 21 should rebuild DAG trace 40. When confidence metric 413 falls below a pre-selected confidence threshold, the trace can be rebuilt using information about most recent executions of the original instruction sequence to reflect any dynamic changes. When the criterion instruction 414 of DAG trace 40 resides in a loop of only a few instructions, the result of the criterion instruction 414 will usually be hard to predict for the first several iterations of the loop, after which, however, a steady state will be reached and accuracy of the prediction will be improved. Therefore, a DAG trace 40 is best rebuilt after the steady state is reached. Each DAG trace 40 can use a counter 411 to count the number of times the trace is accessed in order to ensure that the trace has reached the steady state. DAG trace 40 is rebuilt when its

counter 411 equals a frequency threshold 412 specified for the trace, and when the confidence metric 413 is also below the confidence threshold. Counter 411 is reset when DAG trace 40 is rebuilt.